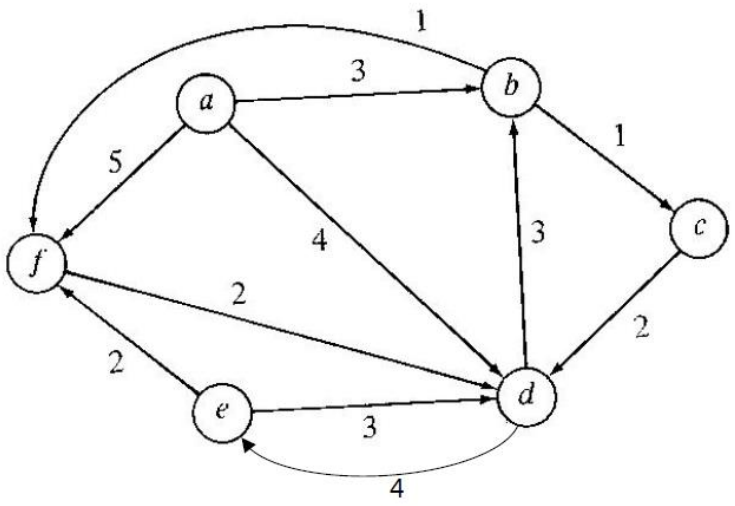
CS 206 Data Structures Spring 2014

Homework 5

Sungwon Kang Due 14 May

1. Represent the following graph by
   (a) an adjacency matrix giving arc costs
   (b) a linked adjacency list with arc costs indicated



2. Show a minimum cost spanning tree obtained by applying each of the following algorithms to the graph in Problem 1:
   (a) the Prim's algorithm (Assume that a is the start node.)
   (b) the Kruskal's algorithm
   In (a) and (b), you should show the progress of the algorithms by drawing graphs step by step.

3. Show the adjacency matrix representation of the transitive closure of the graph in Problem 1.